TO STUDY THE ISSUE AND CHALLENGES INVOLVE IN THE

SPECIALTY CHEMICAL COMPANIES IN INDIA

(WITH SPECIAL REFERENCE TO MUMBAI AND NAVI MUMBAI)

MADHURI A. KADAM¹ & R. GOPAL²

¹Research Scholar, School of Management, D. Y. Patil University, Navi Mumbai, Maharashtra, India ²Director and Head of Department, School of Management, D. Y. Patil University, Navi Mumbai, Maharashtra, India

ABSTRACT

Specialty chemicals are sold for their performance enhancing properties (and are used in Paints, Textiles chemicals, Dyestuffs, Inks, Rubber Chemicals and several other Industrial applications) rather than their basic chemical composition. According to a confederation of Indian Industrial study, this segment is expected to grow from \$20billion to \$80 billion over the next decade. (Lokeshwari S. K. 2013). Specialty Chemical Market segment constitute high value and relatively low volume value added chemicals. These product form and input raw material for several finished product. The claim to fame synthetic business sector covers the incomes created structure the offers of high esteem included chemicals, utilized as a part of the assembling of a wide assortment of items, including, however not constrained to, fine chemicals, added substances, propelled polymers, glues, sealants and forte paints, colors and coatings.

KEYWORDS: Specialty Chemicals, Textiles, Specialty Paint, Plastics, Dyestuffs, Adhesives, Sealants, Fine Chemicals, Basic Chemicals Etc

Received: Jul 11, 2016; Accepted: Aug 01, 2016; Published: Aug 12, 2016; Paper Id.: IJBMRAUG20165

INTRODUCTION

Indian Chemical Industry

The Indian chemical industry, twelfth biggest underway, is developing at a normal rate of 12.5%. In any case, division modernization of existing innovation through outside joint efforts could facilitate improve development. As indicated by exploration investigation the Indian synthetic industry in its new report of Chemical Industry in India. The report examines the qualities of the Indian compound industry and the fragment which was the entire make up this dynamic hardware of development. The enormous globalization and solidification strides taken by the business as clarified in the report with the prerequisite of overwhelming capital speculation that gets more rivalry and the general center of the business to meet the earth challenges.

The report dives further into the procedures connected in the Indian synthetic industry and their characterizing worldwide norms in this way guaranteeing initiative in fares as small as pulling in noteworthy FDI in the business. The businesses dynamic like rivalry, base and the administrative strategies with the reporting prerequisite sent on the business are clarified by the report. The execution and viewpoint of the compound business, especially with regards to India's advancement procedure, relies on that decides the patterns in the general economy. In the years to come, different new streets are prone to emerge in the Indian concoction industry like basic movements, key showcasing, partnerships for household deals and fares, vital promoting cooperation

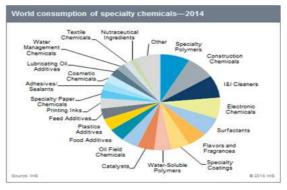
with multinational and exchanging organizations. Utilization of cutting edge innovation, solid examination abilities, in reverse and forward linkage and advancement of local ability to lessen reliance on imported crude materials are key achievement components for Indian substance industry. Also security, wellbeing and environment assurance issues are getting to be vital test for the Indian concoction industry, Indian assembling are tending to such difficulties in a composed way. The Indian chemical industry needs to consolidate to upgrade the scale of operations required to compete effectively. This include scale in manufacturing, issues faced by Indian chemical industry, marketing, R & D and raising finance.

To make necessary changes in the above characteristic, the depth research on chemical industry is very essential.

Specialty Chemicals: An Overview of Specialty Chemicals and Specialty Chemical Industries in India

Indian Specialty Chemical Industry Growth in the Indian strength chemicals industry is driven generally by hearty household request with fares based development in select fragments. Nearby interest for forte chemicals in India will keep on growing, driven by three primary variables. Firstly, key shopper commercial ventures e.g. materials, car, development and so forth are required to develop at rates higher than the general GDP, Secondly, rising client needs crosswise over customer commercial ventures call for items with higher quality/expanded execution items e.g. wrinkle free materials, intelligent glass, concrete admixtures and so on. At long last assembling forms need redesigning prompting procedure and gear updates in numerous businesses e.g. materials, paper, beautifying agents, plastics and so forth.

Claim to fame chemicals are created by a complex, interlinked industry. In the strictest sense, claim to fame chemicals are synthetic items that are sold on the premise of their execution or capacity, instead of for their structure. They can be single-concoction elements or plans (mixes of a few chemicals) whose arrangement strongly impacts the execution and preparing of the client's item. Items and administrations in the strength chemicals industry require escalated learning and progressing advancement. Ware chemicals are sold entirely on the premise of their concoction creation. They are single-compound elements. The item synthetic result of one supplier is by and large promptly compatible with that of whatever other. Amid the most recent 10 years, the claim to fame chemicals industry has encountered slower development and lower general benefit inside a more aggressive environment than in the former time frame. Since the Great Recession, worldwide utilization of claim to fame chemicals has developed in fits and begins. In the wake of diving 10% in quality from 2008 to 2009, utilization grew 16% in 2010, just to fall again in 2011. After an extremely iron deficient development of under 1% in 2012, utilization bounced back 7% in 2013 and developed another 4% in 2014. Notwithstanding a flimsy macroeconomic environment, worldwide assembling and development businesses developed in 2014 and strength compound interest followed in consequence.



Sources: Chemical Weekly 2014

Figure 1: The Following Pie Chart Shows World Consumption of Specialty Chemicals by Type

In 2014, the world's five biggest claim to fame chemicals portions—forte polymers, development chemicals, modern and institutional cleaners, electronic chemicals, and surfactants—had a piece of the pie of around 37%; the 10 biggest sections represented 61% of aggregate yearly strength chemicals deals. Every forte chemicals business section involves a few sub fragments, each with individualized item, advertise, and aggressive profiles.

The claim to fame chemicals business is on the move. Generally, North American, Western European, and Japanese firms have ruled this business. Be that as it may, with exchange liberalization, the spread of procedure innovation, the breakdown of various financial obstructions, the quick development of the recently industrialized Asian economies and rising ways of life in numerous creating nations, the focal point of gravity of the worldwide substance industry is moving toward the Middle East, where shabby petrochemical feedstock's are accessible, and toward Asia, where work expenses are low and financial development is high. Progressively, North American, European, and Japanese claim to fame synthetic maker's hope to creating districts for development. Numerous have set up assembling offices in Asia and somewhere else and in the meantime, Chinese and Indian makers have gotten to be key players in a few claim to fame concoction markets. Be that as it may, the idea of China as an ease maker is gone, since China is moving from a fare center to meet developing household requirements for higher-esteem, downstream items. As rivalry increments and developed items get to be commoditized, advancement stays one of only a handful few wellsprings of upper hand.

The strength chemicals industry is currently attempting to enhance its edges by executing cost increments to make up for higher R&D, vitality, and crude material expenses. This improvement has been particularly recognizable for glues and sealants, paints, plastics added substances, paper and water treatment chemicals, surfactants, and oils. Forte chemicals, for example, nourishment added substances, flavors and aromas, and electronic chemicals can in any case be characterized as great claim to fame chemicals. They are sold in generally little amounts and are shielded from valuing weights since they speak to a little rate of the aggregate expense of the last item. Past estimating change, strength concoction organizations are attempting to meet their budgetary focuses by cutting expenses and growing new items and more quickly developing markets.

Amid 2014-19, volume utilization of claim to fame chemicals is required to increment at near 4% on a worldwide premise. The consolidated utilization in North America, Western Europe, and Japan will develop all the more gradually at around 2% every year. Development in the created countries is compelled by obligation, antagonistic demographic variables, and more tightly monetary approaches. Be that as it may, development in developing markets will be much higher. Specifically, China will have the most noteworthy development rate of all districts amid the following five years. China is seeing some transient difficulties in its economy and the gauge of utilization for claim to fame chemicals has been minimized somewhat from the verifiable scope of 8-9% to 7% every year. By and by, it will keep on powering the development of worldwide claim to fame chemicals amid the following five years. All in all, the developing markets offer more dynamic prospects for the claim to fame chemicals industry due to rising purchaser driven economies and industrialization.

The Specialty Chemicals Opportunities

Long seen as challenging and lacking size of chance, India's strength chemicals potential is progressively being perceived by universal players. Organizations must grasp various India-particular ways to deal with succeed.

For universal synthetic markets that have embarked to tap the development chance of Asian markets over the

previous decade, India has had a tendency to be in China's shadow. In 2010, China overwhelmed the United States to end up the world's biggest synthetic business sector, with India positioning just eighth. India's developing forte chemicals markets are trying at first sight. India has an unassuming chemicals framework on which universal organizations can construct. The Indian government has endeavored to address the issue. In 2007 it is reported five petroleum chemicals and petrochemical venture districts.

Indian claim to fame chemicals market through M&A likewise displays challenges, and there has been no movement in chemicals to coordinate the acquisitions of Indian non specific pharmaceutical producers by global organizations. In chemicals, the set number of sizable procurement hopefuls has been a key reason. India's claim to fame chemicals industry is exceedingly divided and it for the most part includes littler organizations with offers of under &300million per year.

Invest in Developing the Specialty Chemical Market in India

Chemical companies must work with end-market players to instruct them about the advantages that can be caught by utilizing forte chemicals items; this training procedure is key to encourage the reception of chemicals. Universal organizations ought to create nearby items at the right cost to drive request development. An extensive bit of rising interest for claim to fame chemicals in India is in lower-evaluated sections. Companies should work, for example with consumer products companies that are represents substantial growth if the consumer previously purchased a product that did not include the ingredient at all. Similar dynamics are at work in industries such as automotive construction, textiles and dyes.

Companies should support the execution of item and environment models for the advantage of society that will likewise standardize the utilization of more propelled strength chemicals fixings or that will require all the more earth inviting claim to fame chemicals deciding items for customer. This can be accomplished by working with claim to fame chemicals devouring commercial enterprises and the administration.

Development of Specialty Chemical Companies in India

The country's scale furthermore, varying levels of abundance and improvement make it troublesome for worldwide organizations to imitate plans of action utilized as a part of different nations and organizations must reexamine their methodology.

Disseminating to significant dish Indian clients while addressing the necessities of the nation's divided and scattered end-client markets exhibits a test. Organizations must make a key record system for extensive clients and accomplice with different organizations and neighborhood wholesalers to assemble appropriation systems crosswise over geologies, which would help them, guarantee scope and decrease venture cost.

Supply chains in India can be mind boggling given the divided and topographically scattered business sector. Creating solid merchant base, making tolling courses of action with cost-proficient neighborhood organizations, upgrading the generation impression crosswise over India, making a productive logistics is ability and working with wholesalers vital to manage return on invested capital.

REVIEW OF LITERATURE

- Strategic Assessment of Worldwide Specialty Chemicals Market Forecast 2016 to till 2021 Research and Markets: http://www.businesswire.com/news/home/20160511005569/en/2016-Strategic-Assessment-Worldwide-Specialty-Chemicals-Market Specialty chemicals is anticipated that would represent somewhat under a billion US1\$ by 2021. Starting 2015 claim to fame chemicals still record for under 25 percent of the overall compound yield which was esteemed at somewhat over \$4 trillion. Claim to fame chemicals as of date are evaluated higher than the standard ware chemicals as a result of the particular application for these chemicals. Besides, these chemicals need to affirm to extremely strict ecological controls and accordingly should be of the most elevated quality. The cost of these chemicals will keep on being higher than the standard item chemicals significantly as it is normal that there will be more specialty applications for these chemicals before the end of the figure time frame. The extent of the exploration report is as per the following: The study will give the business sector size of the Specialty Chemicals market in 2015 and also give the normal income to be created till 2021. Details with regards to the different fragments inside the Specialty Chemicals showcase that are adding to the income of the general business sector will be given by the individual regions
- Specialty Chemicals Global Market Research Report 2016. http://www.medgadget.com/2016/02/specialtychemicals-global-market-research-report-2016.html - Specialty chemicals are the substance items which make impressive worth expansion to a wide cluster of items having a place with different commercial ventures, for example, material, ink added substances, development, oil and gas, makeup, nourishment and others. Claim to fame chemicals can be single-synthetic details or elements whose organization incredibly influences the general working of customer's' item. These chemicals are utilized on the premise of their capacity and execution. Unending R&D exercises happening in the business sector have encouraged improvement of items with ideal and propelled highlight, in this way driving the development of the business sector. Quick industrialization has prompted an expanding request from Asian nations, for example, India and China. Expanding speculations have been made in development and foundation improvement ventures in Asia-Pacific, in this way catapulting Asia-Pacific to the position of a main destination for claim to fame synthetic producers. Be that as it may, varieties in crude material expense and strict controls forced by the legislature are prone to hamper the development of world claim to fame chemicals market. Development chemicals, represented the biggest section on the planet claim to fame concoction market in 2014. Expanding urbanization in rising economies is driving open base and lodging ventures; which thus has expanded the utilization of claim to fame development chemicals, for example, defensive coatings, glues and sealants, solid admixtures and black-top added substances. The development chemicals industry is blasting in rising economies, for example, Asia-Pacific, the Middle East, Africa, Central and South America. In 2014, nourishment added substances, restorative chemicals and paper and mash chemicals all things considered represented around half of the world forte chemicals utilization. Ink added substances are anticipated to be the quickest developing portion, enlisting a CAGR of 5.8% amid the forecast period.
- Global Specialty Chemicals Market Expected to Grow at 5% CAGR During 2016 2022: P&S Market Research.
 http://www.prnewswire.com/news-releases/global-specialty-chemicals-market-expected-to-grow-at-5-cagr-during-2016---2022-ps-market-research-580949651.html

 According to market research "Global Specialty

<u>www.tjprc.org</u> editor@tjprc.org

Chemicals Market Size, Share, Development, Growth and Demand Forecast to 2022 - Industry Insights by Type (Agrochemicals, Construction Chemicals, Electronic Chemicals, Cleaning Chemicals, Specialty Coatings, Surfactants, Polymer Additives, Plastic Additives, Lubricants and Oilfield Chemicals, Paper and Textile Coatings, Food Additives, Adhesives and Sealants, Others)" by P&S Market Research, the worldwide forte chemicals business sector was esteemed at \$828.9 billion in 2015, and it is required to develop at a CAGR of 5.0% amid 2016 - 2022. The variables driving the development of the worldwide business sector incorporate expansive base of end-use commercial ventures, appeal from Asia-Pacific, expanding request from car industry, and mechanical headways in the worldwide claim to fame chemicals market. The development of the worldwide forte chemicals business sector is to a great extent driven by popularity for strength chemicals farming and development commercial ventures. The developing development exercises in Asia-Pacific and improvement of environment neighborly items offer sufficient income era chances to the makers of claim to fame chemicals. Among the different sorts of claim to fame chemicals, the agrochemicals section held the biggest offer (15.9%) with the business sector size of \$131.4 billion in 2015 in the worldwide forte chemicals market. The development chemicals fragment is foreseen to witness the most noteworthy development at a CAGR of 6.8% amid the figure time frame. The development chemicals portion in the worldwide claim to fame chemicals business sector was esteemed at \$79.3 billion in 2015, and it is foreseen to reach \$125.6 billion by 2022. The high development in the development chemicals portion is ascribed to the expanding development exercises in Asia-Pacific, and expanding concentrate on structures redesign in created economies and government activities for green buildings.

- Dal Pont et alii (2013) made a similar attempt to define innovation in the chemical sector. Likewise, Hutcheson et alii (1996) focused on sources of technical innovation in the network of companies supplying chemical process plants and equipment. They found out that alliances between contractors and equipment manufacturers not only help to reduce plant design, procurement and erection costs, but also counter the competitive threat from more specialist firms (particularly the large equipment manufacturers that have their own project contracting skills). Furthermore, their study showed that "collaborative innovation" can generate a technological competitive advantage, whilst sharing cost and risk. Abratt and Lombard (1993) studied 51 specialty chemical firms in South Africa to identify the major determinants of product innovation in the specialty chemicals industry. The result showed that innovation in these firms is customer driven, but that there are deficiencies in product predevelopment activities, attention paid to marketing, and the synergy with existing technologies. The drawback of this research is that it does not provide a recipe for product innovation success and the solution found by each firm will depend ultimately on their own external and internal environments.
- The latest study by Dal Pont et al (2013) discusses the sequence of innovation of a large chemical company. Ren (2009) made a similar study which built a chart showing the relation between the innovators in the petrochemical industry. Stetter and Lieb (2000) produced a historical over-view of innovation in the crop protection industry from its beginnings to the present day and attempted to show how the research-based crop protection industry was prepared for current and future challenges. They devoted a considerable amount of space to trends in research. Fagerberg (2003) shows the trend of citation and publication in innovation-related topics. Chesbrough showed that large chemical company's innovation policy of European chemical companies with special focus on large companies evolved from closed to open innovation structures as they went global in their R&D activities (2003). Several studies have been made on the European chemical industry and innovation in economically difficult

situations. Colombo (1986) appraised the perspectives of the European chemical industry at a time of economic crisis when the forecast rates of economic growth for the next two decades were continuing to decline. He examined the key issues in the chemical industry: its changing geography, industrial redeployment, the change from product chemistry to function chemistry, and the problems of scientific and technological innovation and its consequences for industry and society.

• Cooper and Kleinschmidt (1993) found what separated new-product winners from losers in a chemical industry and stated that the key to new-product success was the quality of the activities in the innovation process, early and sharp project and product definition, a strong team leader together with an accountable, multidisciplinary team. Earlier, Colombo (1980) claimed that the chemical industry was an inherently innovative industry and highlighted key innovation in the chemical industry between 1930 and 1970. He also focused on constraints or barriers to innovation in the chemical industry. Achilladelis et alii (1990) examined the mechanisms and dynamics of the process of innovation in the chemical industry. Quinn (1983) stated that innovation processes can be chaotic, but need to be managed well if the end results are to be achieved. Johnson (2001) studied the process of innovation and showed how a big organization with a significantly large infrastructure can generate innovation internally. He described five different forms of innovation in a company.

OBJECTIVES AND HYPOTHESIS

Objectives

- To understand the issues and challenges faces by the Specialty Chemical Industries in the define market.
- To study the steps undertake by the current manufacturers to improve competitiveness.

Hypothesis

- **H01**: There is no significant relationship between strategies should be developed where the companies should identify markets where there is continued demand for product and should consider the factor of workforce.
- **H11**: There is a significant relationship between strategies should be developed where the companies should identify markets where there is continued demand for product and should consider the factor of workforce.
- **H02**: There is no significant relationship between the steps and strategy developments for using latest technology with the limited finance is also an important area to focus on for competitiveness and export.
- **H12**: There is a significant relationship between the steps and strategy developments for using latest technology with the limited finance is also an important area to focus on for competitiveness and export.

Gap Analysis

The paper explores the strategies for marketing specialty chemicals adopted by multinational corporations. It also researches the challenges and opportunities for specialty chemicals in emerging economics. Government and Industry focus towards manufacturing and value addition in emerging markets has led to global companies expanding their business in emerging markets to explore these untapped growth opportunities

RESEARCH METHODOLOGY

The research is based on primary and secondary data. This study used both quantitative and qualitative techniques of data collection. Random sampling method was adopted to collect data from employees. A structured questionnaire was

used as the tool of data collection. The questionnaire was distributed to 25 employees of small, medium and large manufacturing organizations located in Navi Mumbai and 30 employees of small, medium and large manufacturing organizations located in Mumbai.

The secondary sources of data collection include book, journal, magazines of related topics of research and the related websites. SPSS is used for Data Analysis and Pilot Study.

DATA ANALYSIS AND INTERPRETATION

Q.1.What is the Various Issues Faced by Pharmaceutical Companies/Industries in Strategy Development on Productivity and Export Growth

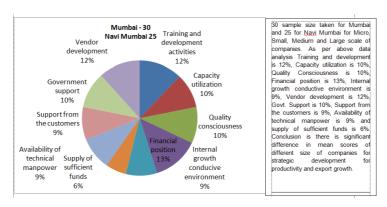


Figure 2

Q.2. What are the Areas of Strategy Development W.R.T. Investment Priorities to Enhance Export Competency?

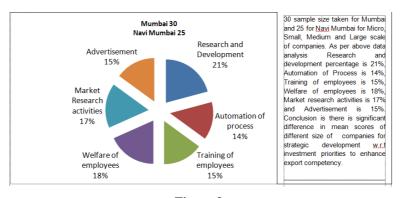


Figure 3

Q.3. What are the Variables of Strategy Development for Enhancing Competitiveness?

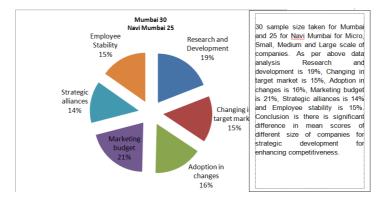


Figure 4

Q.4. What are the Strategies Related to Cost and Quality to Enhance Export Growth?

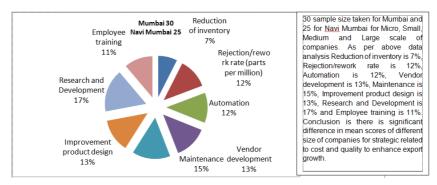


Figure 5

Q. 5. How Would You Assess The Role Played by the Following Factors in Your Company's Competitiveness Position in The Market in the Last Five Years? (Please Choose One Square in Each Row)

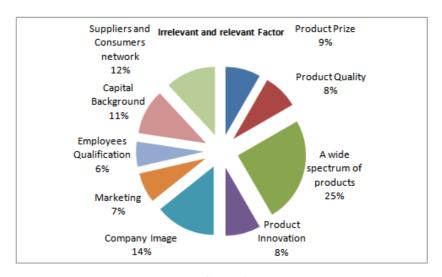


Figure 6

Findings

- **Product:** as per the issues faced by pharmaceutical companies/industries in strategy development on productivity is depend upon company size. Micro and small size of companies faces more issues of strategic development or innovation factor in manufacturing process. As per the above data collection through questionnaire i.e. requirement of company is improvement in research and development in micro and small scale of company.
- Issues and challenges: this research paper based on issues, challenges and strategies faced by Specialty chemical companies in Navi Mumbai and Mumbai. The main issue faced by companies is quality of raw material and training and development of employees. There is main finding in the research is there is main gap is in research and development factor. The supply of raw material on time with good quality is the major issues faces by companies.

Place

25% manufacture prefer the distributors which are nearer to the customers while appointing distributor

<u>www.tjprc.org</u> editor@tjprc.org

15% manufactures prefer large storing (warehouse) while appointing distributor. 12% manufacturer prefer those who having own transporting facility/capacity while appointing distributor. While 48% manufacturer does not have their own distributors.

• 12% sale increased by appointing up to 5 distributors. 18% sale increased by appointing 10 distributors. 22% sale increased by appointing 25 distributors and 48% companies does not have distributors.

CONCLUSIONS

The following sections are the key elements and levers which stakeholders such as industry, government and academia can use to overcome the challenges faced by the domestic and international specialty chemical and Indian chemical industries:

- Improve infrastructure: there is dire need to assemble better foundation and give sufficient force/water to bolster
 mechanical development of chemicals. Base is insufficient regarding safe transportation of items and in addition
 appropriate merchandise stockpiling and fares. Infrastructure such as roads and ports near the SEZs / PCPIRs
 could be developed.
- Creation of cluster: Indian specialty chemical industry understands the importance and its benefits of cluster of companies.
- Facilitating land acquisition: land acquisition is another roadblock faced by the private sector in setting up new infrastructure. States/Centre has adequate capability to resolve the issue by coming together to develop a common policy for land acquisition and identify areas for green-field plants.
- Providing support for new technologies and establish technology up-gradation fund (TUF).
- Implement the various plan for strengthening R&D: establish chemical sector council for innovation having representatives from the government, chemical companies, industry association and reputed research / educational institutes (e.g. NCL, ICT etc).

RECOMMENDATIONS AND SUGGESTIONS

- Focus on R&D: chemical industry needs to focus on R&D in one or multiple areas. While R&D remains universal imperative, to source intellectual as well as human capital. Such linkages may be effectively used for setting up of in-house R&D facility or for outsourcing R&D activities. The big industries like BASF, Omkar Specialty chemicals, Apar Industries, Sudarshan chemicals having their own well developed R&D, so new product innovation would get possible for them and they continuous develop their new products, but small scale industries in Navi Mumbai and Mumbai areas they don't have their own R&D lab, they are fully depends on private R&D lab or Government R&D lab or outsourcing the products.
- Improving basic management capabilities: chemical industries basically large and medium scale has good record of management expertise. This could adopt techniques such as good manufacturing practices, total quality management (TQM), total production management and risk management. They are more concentrate on product quality and service like this other micro and small industries in Navi Mumbai and Mumbai area should adopt such types of techniques.

Limitation of Study

- The data collection of this study is restricted to Mumbai and Navi Mumbai only due to time constraint.
- Collecting information from the respondents is a difficult task, because of the different level of experience and different background they might have provided the information based on their own perceptions.
- Due to confidentiality respondents were hesitating to disclose their strategies and plans, thus the researcher was dependent on the replies given by the respondents.
- It was difficult for the researcher to convince the respondents during data collection period.

REFERENCES

- 1. Arora, A.; Landau R. and Rosenberg, N.(1998). Chemicals and Long Term Economic Growth, New York: John Wiley and Sons.
- 2. Arvanitis, R. and Villavicencio, D.(2000) Learning and Innovation in the Chemical Industry, Developing Innovation Systems: London, Continuum,
- 3. Cefic (2013). The European Chemical Industry Council: Facts and Figures 2012. Retrieved from http://www.cefic.org/Facts-and-Figures/,
- 4. Chesbrough, H. (2006). Open Innovation: The New Imperative for Creating and Profiting from Technology. Harvard Business School Publishing Corporation. 156 RIO, N° 14, 2015 Supriyo Das, Ignasi Brunet Icart
- 5. CORDIS(2014).Individual European Technology Platform. Retrieved from http://cordis.europa.eu/technology-platforms/individual_en.html, Dal Pont, J.; Potier, O. and Camargo, M. (2013). Process Engineering and Industrial Management (pp. 371–96). Wiley.
- 6. Davis, N. (2013). ICIS Top 100 chemical companies. Retreived from ICIS Chemical Business website: http://img.en25.com/Web/ICIS/FC0211_CHEM_201309.pdf>.
- 7. Strategic Assessment of Worldwide Specialty Chemicals Market Forecast 2016 to till 2021 Research and Markets: http://www.businesswire.com/news/home/20160511005569/en/2016-Strategic-Assessment-Worldwide-Specialty-Chemicals-Market
- 8. Specialty Chemicals Global Market Research Report 2016. http://www.medgadget.com/2016/02/specialty-chemicals-global-market-research-port-2016.html Global Specialty Chemicals Market Expected to Grow at 5% CAGR During 2016 2022:

 P&S Market Research. http://www.prnewswire.com/news-releases/global-specialty-chemicals-market-expected-to-grow-at-5-cagr-during-2016---2022-ps-market-research-580949651.html